

DETAILED ACTION

Status of Claims

1. Claims 1-3 are canceled. Claims 4-14 are pending where claims 12-14 have been amended. Claims 4-11 are withdrawn from consideration and claims 12-14 remain for examination on the merits.

Status of Previous Rejections

2. The previous 35 USC § 102/103 and § 103 rejections of the claims have been maintained.

Election/Restrictions

3. Applicant's election without traverse of group I, claims 12-14 in the reply filed on 11/30/2009 is acknowledged.

4. Claims 4-11 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 11/30/2009.

Claim Rejections - 35 USC § 102/103

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 12-13 are under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 02129333 to Kudo et al (cited in previous office action).

Regarding claim 12, Kudo discloses an aluminum alloy sheet comprising the following composition (Kudo, Table 1, example 6), which lies within the instantly claimed composition:

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Element	Claimed wt%	Kudo wt%	Lies within?
Si	0.3-1	0.36	Yes
Fe	0-5	~0	Yes
Cu	0.3-0.7	0.57	Yes
Mn	1.1-1.8	1.15	Yes
Mg	0.15-0.6	0.39	Yes
Cr	0.01-0.3	0.02	Yes
Zn	0-0.10	~0	Yes
Ti	0-0.3	0.05	Yes
Al	balance	balance	Yes

Although Kudo does not explicitly disclose that the yield strength $R_{p0.2}$ of the aluminum sheet is greater than 65 MPa at room temperature and at a temperature of 250 °C, when the structure recited in the reference is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent. Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established (see MPEP 2112.01 [R-3].) In the instant case, the aluminum sheet of Kudo would be expected to have the same or similar properties as the instantly claimed aluminum sheet because the aluminum sheet of Kudo has the same composition, structure, and intended use.

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Therefore, a rejection based alternatively on either 35 U.S.C. 102(b) or 35

U.S.C. 103(a) is eminently fair and acceptable.

Regarding claim 13, the sheet of Kudo could be considered a side part strip for producing a heat exchanger.

10. Claims 12-13 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 04202735 to Dokou (cited in previous office action).

Regarding claim 12, Dokou discloses an alloy for heat exchangers comprising the following composition (Dokou, Table 1, example C), which lies within the instantly claimed composition:

Element	Claimed wt%	Dokou wt%	Lies within?
Si	0.3-1	0.54	Yes
Fe	0-5	0.25	Yes
Cu	0.3-0.7	0.48	Yes
Mn	1.1-1.8	1.12	Yes
Mg	0.15-0.6	0.35	Yes
Cr	0.01-0.3	0.13	Yes
Zn	0-0.10	~0	Yes
Ti	0-0.3	0.01	Yes
Al	balance	balance	Yes

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Although Dokou does not explicitly disclose that the yield strength $R_{p0.2}$ of the aluminum sheet is greater than 65 MPa at room temperature and at a temperature of 250 °C, when the structure recited in the reference is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent. Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established (see MPEP 2112.01 [R-3].) In the instant case, the aluminum sheet of Dokou would be expected to have the same or similar properties as the instantly claimed aluminum sheet because the aluminum sheet of Dokou has the same composition, structure, and intended use. Therefore, a rejection based alternatively on either 35 U.S.C. 102(b) or 35 U.S.C. 103(a) is eminently fair and acceptable.

Regarding claim 13, the sheet of Dokou could be considered a side part strip for producing a heat exchanger.

Claim Rejections - 35 USC § 103

11. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 02129333 to Kudo et al (cited in previous office action).

Regarding claim 14, Kudo discloses an aluminum alloy sheet for heat exchangers as described above. Kudo does not explicitly disclose the dimensions of the sheet. However, where the only difference between the prior art and the claims is a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed

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device is not patentably distinct from the prior art device (see MPEP 2144.04 IV A). The sheet of Kudo would not perform differently from the instantly claimed sheet, therefore the instantly claimed sheet is not patentably distinct from the sheet of Kudo.

12. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 04202735 to Dokou (cited in previous office action).

Regarding claim 14, Dokou discloses an aluminum alloy sheet for heat exchangers as described above. Dokou does not explicitly disclose the dimensions of the sheet. However, where the only difference between the prior art and the claims is a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device is not patentably distinct from the prior art device (see MPEP 2144.04 IV A). The sheet of Dokou would not perform differently from the instantly claimed sheet, therefore the instantly claimed sheet is not patentably distinct from the sheet of Dokou.

13. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0718072 A1 to Miller (cited in previous office action).

Regarding claim 12, Miller discloses an aluminum alloy sheet for heat exchangers comprising the following composition (Miller, abstract), which overlaps the instantly claimed composition:

Element	Claimed wt%	Miller wt%	Overlap
Si	0.3-1	>0.15	0.3-1
Fe	0-5	0-0.8	0-0.8
Cu	0.3-0.7	0.2-2.0	0.3-0.7

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Mn	1.1-1.8	0.7-1.5	1.1-1.5
Mg	0.15-0.6	0.1-0.6	0.15-0.6
Cr	0.01-0.3	0-0.35	0.01-0.3
Zn	0-0.10	~0	~0
Ti	0-0.3	0-0.15	0-0.15
Al	balance	balance	balance

In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists (see MPEP 2144.05 [R-5]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected values for the composition of each element that lie within the instantly claimed ranges because Miller discloses the same utility throughout the disclosed ranges.

Miller also discloses that the aluminum alloy sheets of Miller have a yield strength $R_{p0.2}$ of greater than 85 MPa and preferably at least 100 MPa (Miller, page 5, lines 44-46), lying within the instantly claimed range of greater than 65 MPa. Although Miller does not explicitly state what temperature these yield strengths are valid for, presumably it is room temperature, and there is no indication that the yield strength would fall below 65 MPa at 250 °C. Furthermore, when the structure recited in the reference is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent. Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or

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substantially identical processes, a prima facie case of either anticipation or obviousness has been established (see MPEP 2112.01 [R-3].) In the instant case, the aluminum sheet of Miller would be expected to have the same or similar properties as the instantly claimed aluminum sheet because the aluminum sheet of Miller has the same composition, structure, and intended use.

Regarding claim 13, the sheet of Miller could be considered a side part strip for producing a heat exchanger.

Regarding claim 14, Miller discloses an aluminum alloy sheet for heat exchangers as described above. Miller does not explicitly disclose the dimensions of the sheet. However, where the only difference between the prior art and the claims is a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device is not patentably distinct from the prior art device (see MPEP 2144.04 IV A). The sheet of Dokou would not perform differently from the instantly claimed sheet, therefore the instantly claimed sheet is not patentably distinct from the sheet of Miller.

14. Claims 1-3 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,391,129 B1 to Hurd et al (cited in previous office action).

Regarding claim 1, Hurd discloses an aluminum alloy sheet for heat exchangers comprising the following composition (Hurd, abstract), which overlaps the instantly claimed composition:

Element	Claimed wt%	Hurd wt%	Overlap
Si	0.3-1	0.15-1.0	0.3-1

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Fe	0-5	0-0.8	0-0.8
Cu	0.3-0.7	0.2-2.0	0.3-0.7
Mn	1.1-1.8	1.0-1.4	1.1-1.4
Mg	0.15-0.6	0.2-0.5	0.15-0.5
Cr	0.01-0.3	0-0.35	0.01-0.3
Zn	0-0.10	0-0.25	0-0.25
Ti	0-0.3	0-0.15	0-0.15
Al	balance	balance	balance

In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists (see MPEP 2144.05 [R-5]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected values for the composition of each element that lie within the instantly claimed ranges because Hurd discloses the same utility throughout the disclosed ranges.

Hurd also discloses that the aluminum alloy sheets of Hurd have a yield strength $R_{p0.2}$ of greater than 270 MPa (Hurd, column 6, lines 55-67), lying within the instantly claimed range of greater than 65 MPa. Although Hurd does not explicitly state what temperature these yield strengths are valid for, presumably it is room temperature, and it seems incredibly unlikely that the yield strength would fall below 65 MPa at 250 °C, as this would require a greater than 75% decrease of the stated yield strength of Hurd. Furthermore, when the structure recited in the reference is substantially identical to that

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of the claims, claimed properties or functions are presumed to be inherent. Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established (see MPEP 2112.01 [R-3].) In the instant case, the aluminum sheet of Hurd would be expected to have the same or similar properties as the instantly claimed aluminum sheet because the aluminum sheet of Hurd has the same composition, structure, and intended use.

Regarding claim 13, the sheet of Hurd could be considered a side part strip for producing a heat exchanger.

Regarding claim 14, Hurd discloses an aluminum alloy sheet for heat exchangers as described above. Hurd does not explicitly disclose the dimensions of the sheet. However, where the only difference between the prior art and the claims is a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device is not patentably distinct from the prior art device (see MPEP 2144.04 IV A). The sheet of Dokou would not perform differently from the instantly claimed sheet, therefore the instantly claimed sheet is not patentably distinct from the sheet of Hurd.

Response to Arguments

15. Applicant's arguments filed 11/30/2009 have been fully considered but they are not persuasive.

Applicant argues that the cited references do not explicitly disclose the instantly claimed properties. This is not found persuasive because when the structure recited in

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the reference is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent. Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established (see MPEP 2112.01 [R-3].)

Applicant argues that the cited prior art do not have the instantly claimed properties because the prior art is made by a different method than the method applicant discloses in the instant specification. This is not found persuasive because applicant has shown no evidence that the claimed properties can not be present in products manufactured by methods other than applicant's disclosed method, nor has applicant provided any evidence that the products of the cited prior art have properties falling outside of the instantly claimed ranges.

Conclusion

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Walck whose telephone number is (571)270-5905. The examiner can normally be reached on Monday-Friday 9 AM-6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571)272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Examiner, Art Unit 1793
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